All Hazards Weather Support Workshop:
NOAA's Office of Response and Restoration

When spills happen, we respond…

Origins of NOAA HAZMAT Program…

– 1976

Argo Merchant oil spill, Nantucket, Massachusetts

The tanker broke into two pieces Dec. 21, 1976, after running aground six days earlier on its way to Salem with a load of 7.3 million gal. of heavy fuel oil.

Spilled Oil Research (SOR) Team established

– Nov 16, 1977 *Scientific Support Team* established for emergency spill response assistance to the U.S. Coast Guard and EPA


Before there was NOAA HAZMAT

AGENCY MISSION STATEMENT

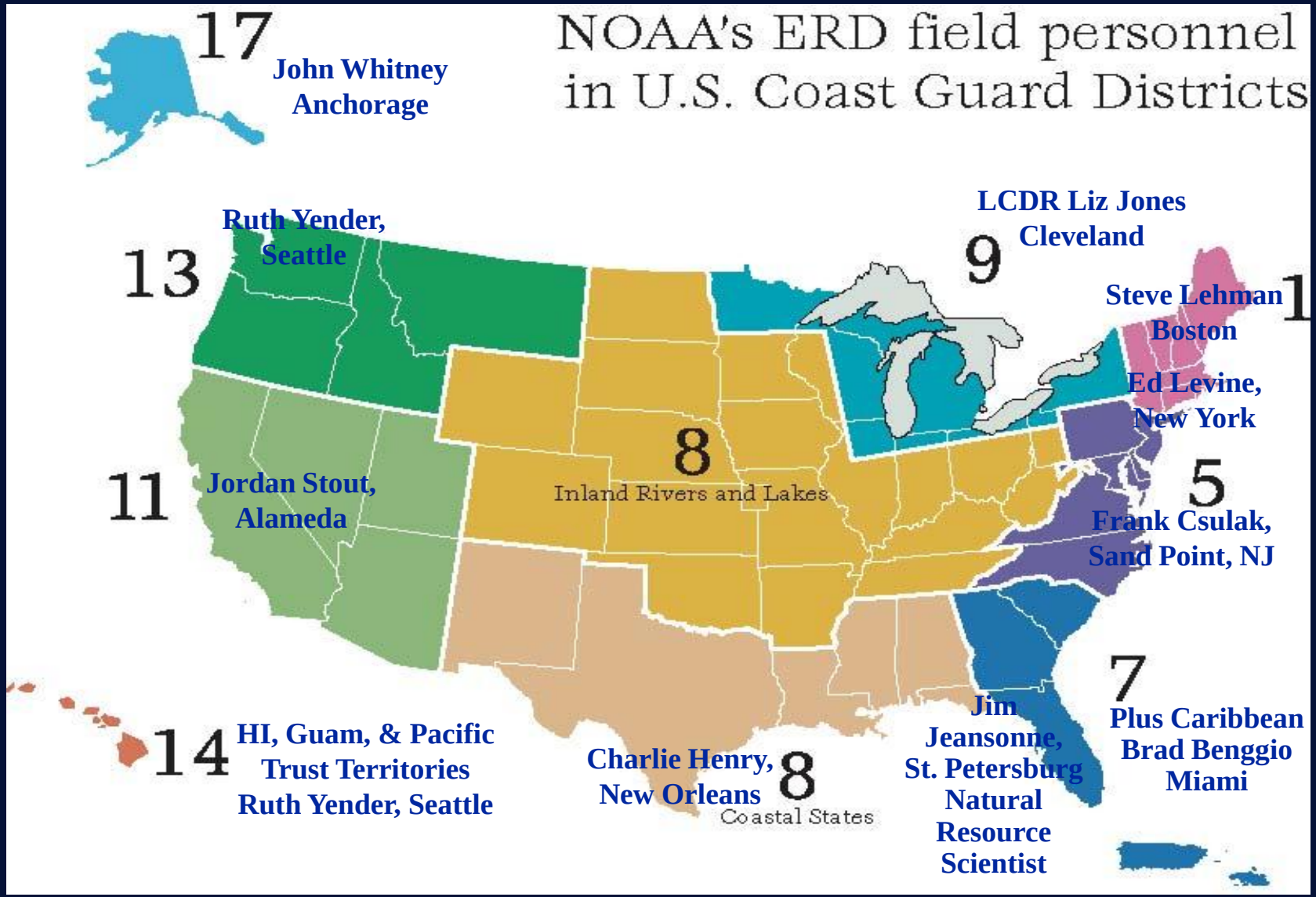
The NOAA Office of Response and Restoration is guided by three goals in carrying out its stewardship responsibilities:

- Reducing threats to coastal resources and human health through planning and response.
- Protecting coastal resources and human health by recommending and implementing appropriate response actions.
- Restoring injured trust resources.

Other than just another NOAA Scientist…

- …what is a Scientific Support Coordinator (SSC)?
- …see IMH, p15-22
- …total of 9 SSCs

DISTRIBUTION OF NOAA SSCs



Scientific Support Coordinator (SSC):

- SSCs provide the Federal On Scene Coordinator (FOSC) with scientific advice with regard to the best course of action during a spill response.
  - FOSC is most often the USCG COTP or an EPA OSC
  - SSC's do not restrict support to only the USCG and EPA
- The SSCs are essentially scientific-technical consultants to the FOSC for oil and hazardous material incidents. SSCs may be requested to respond to any emergency (all hazards).
- One of the identified Special Forces…


Chemical Spills


Oil Spills
TORM MARY
KØBENHAVN
8/2/2004
Photo Credit NOAA (Whitmore)

NOAA's First Satellite Map On-the-Wall


U. S.
COAST GUA

NOAA Estimation of Floodwater Depth


NOAA


SEA WOLF
SEA FALCON


CATERPILLAR
320C

USCG GOAL IS “BEST RESPONSE”

The SSC’s job (or any responders job)

is to help affect the spill response such that the net result meets the requirements of a “best response.”

(IMH 15-4)

NOAA Scientific Support Includes:

- *Weather Forecast*
- *Tides and Currents*
- *Hazard Characterization*
- *Tactical Trajectory*
- *Natural Resources at Risk (RAR)*
- *Overflight Obs.*
- *SCAT*
- *Environmental issues and trade-offs*
- *Consultation*

Science Team Composition

(the guys and gals who make the SSC look good)

- SSC's often manage a team of scientist:
  - Oceanographers
  - Modelers
  - Biologists
  - Chemists
  - Weather Forecasters (I-Met)
  - Info. Management Specialists

- Each spill is unique and the team composition highly variable to meet the needs and demands of the FOSC.

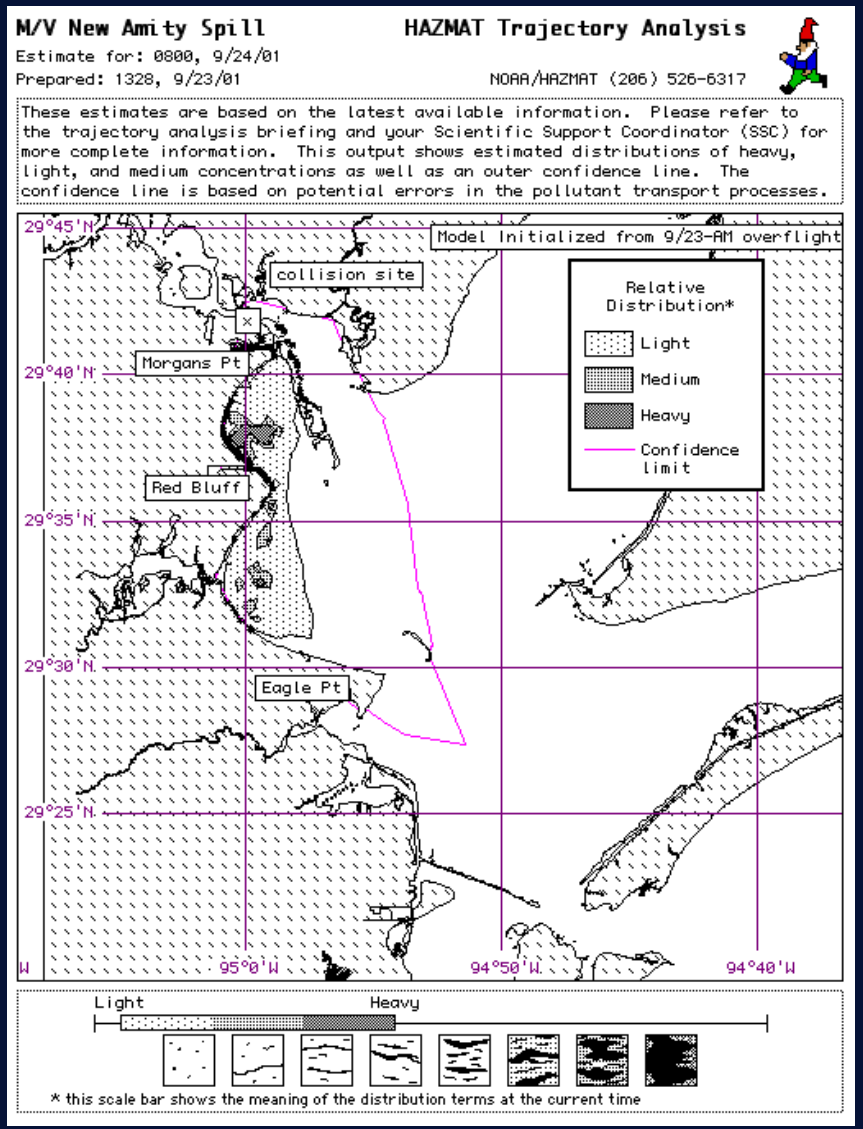
(>30 years of corporate knowledge)

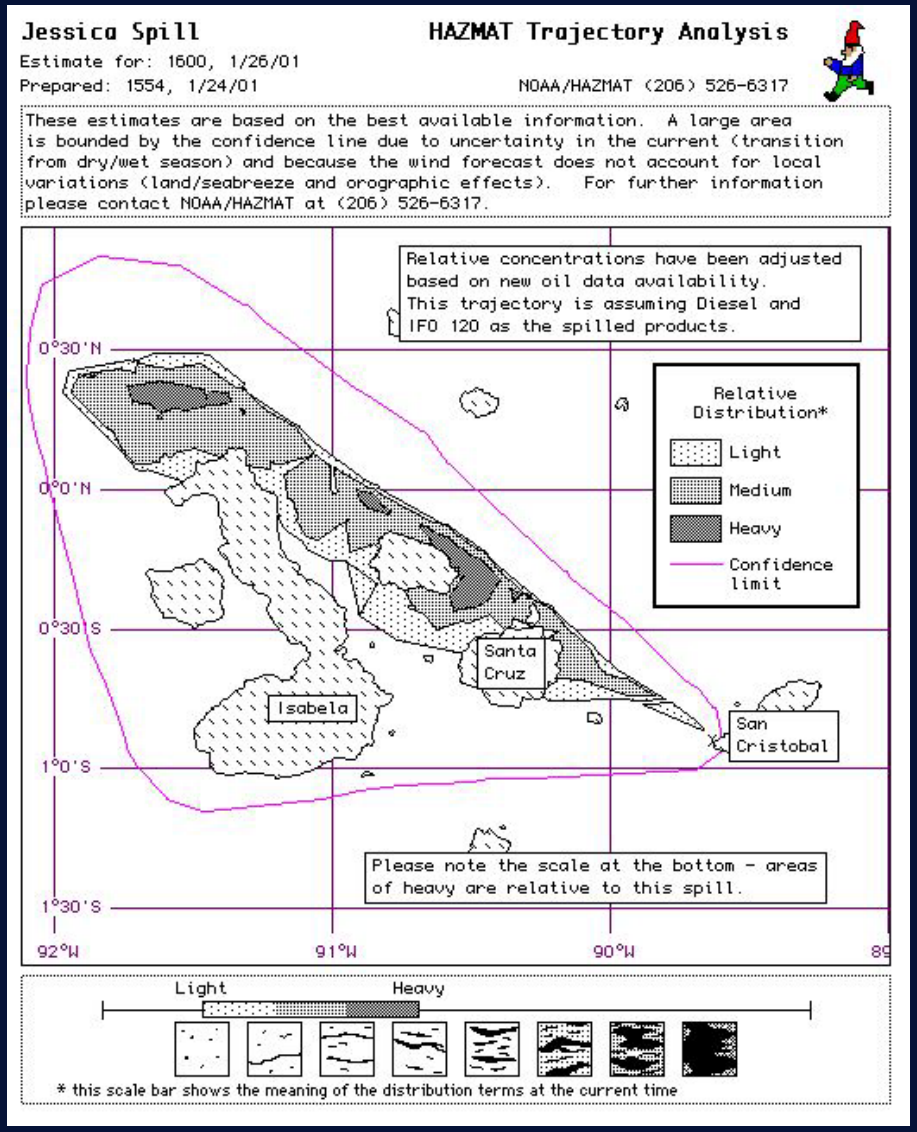
Pollutant Transport/Weathering Modeling

- Interpretive Oil Trajectories (Forecasts)
  - Verbal Forecast
  - Written Forecast
- Modeling Products
  - ALOHA
  - OSSM
  - GNOME
  - ADIOS2

surface transport drivers include wind, currents, and tides

Tactical Planning - Trajectory Analysis

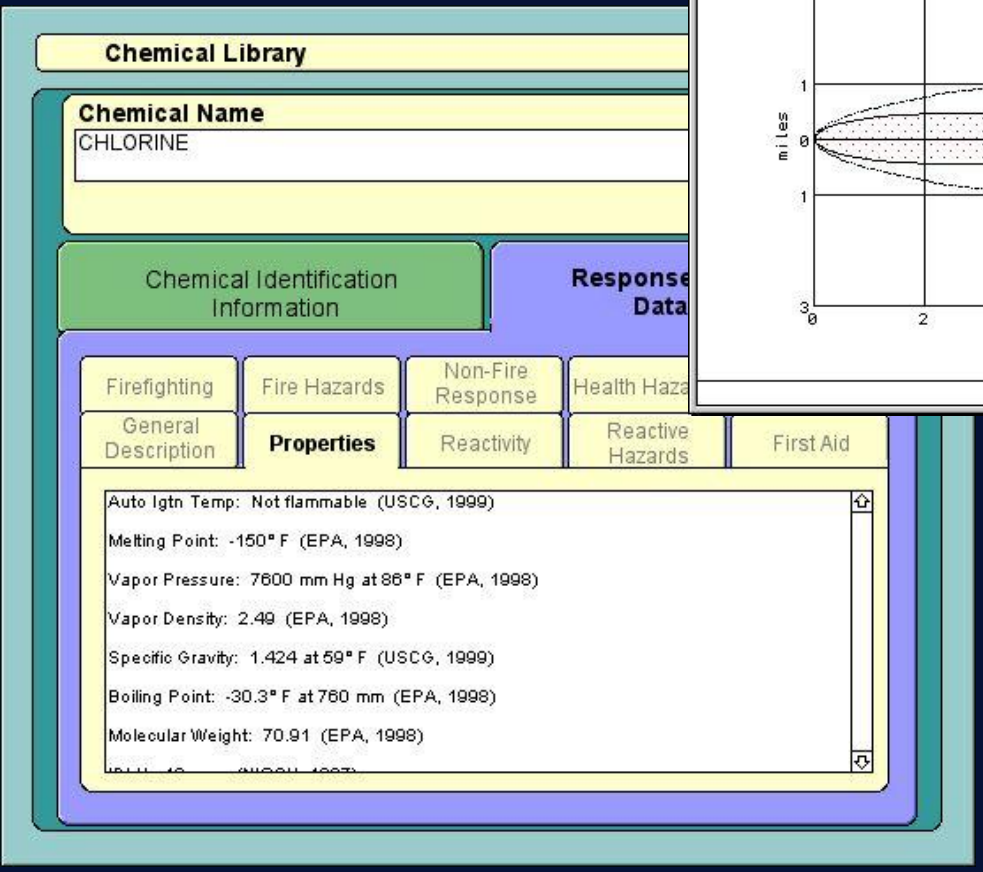


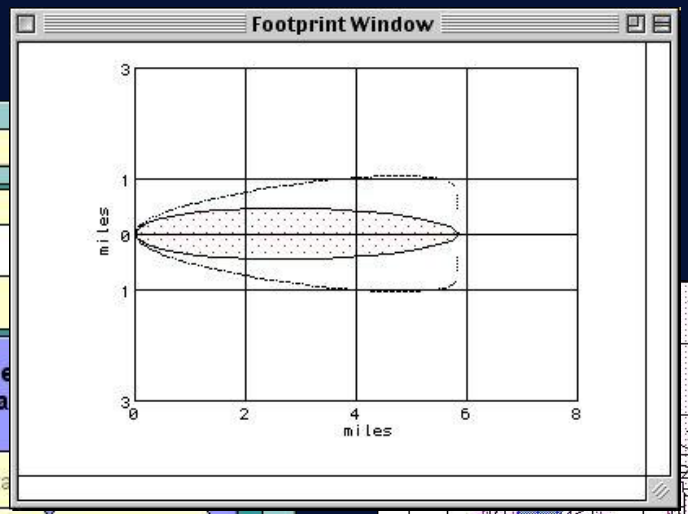


HAZMAT Chemical Products

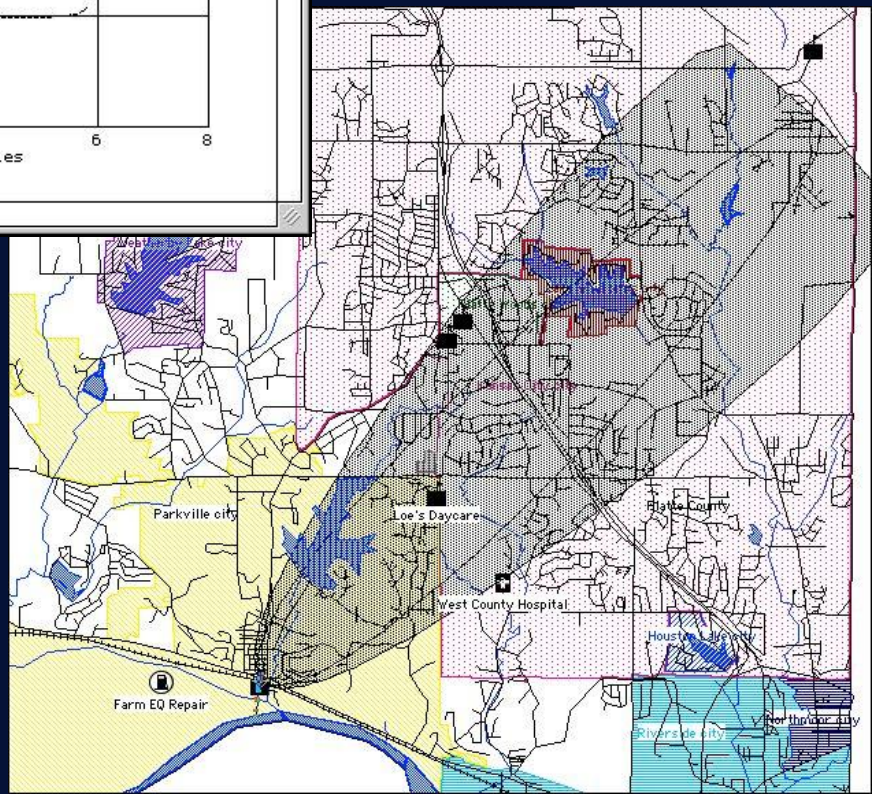
Aloha

CAMEO





Marplot



Hydrogen Sulfide Barge Incident

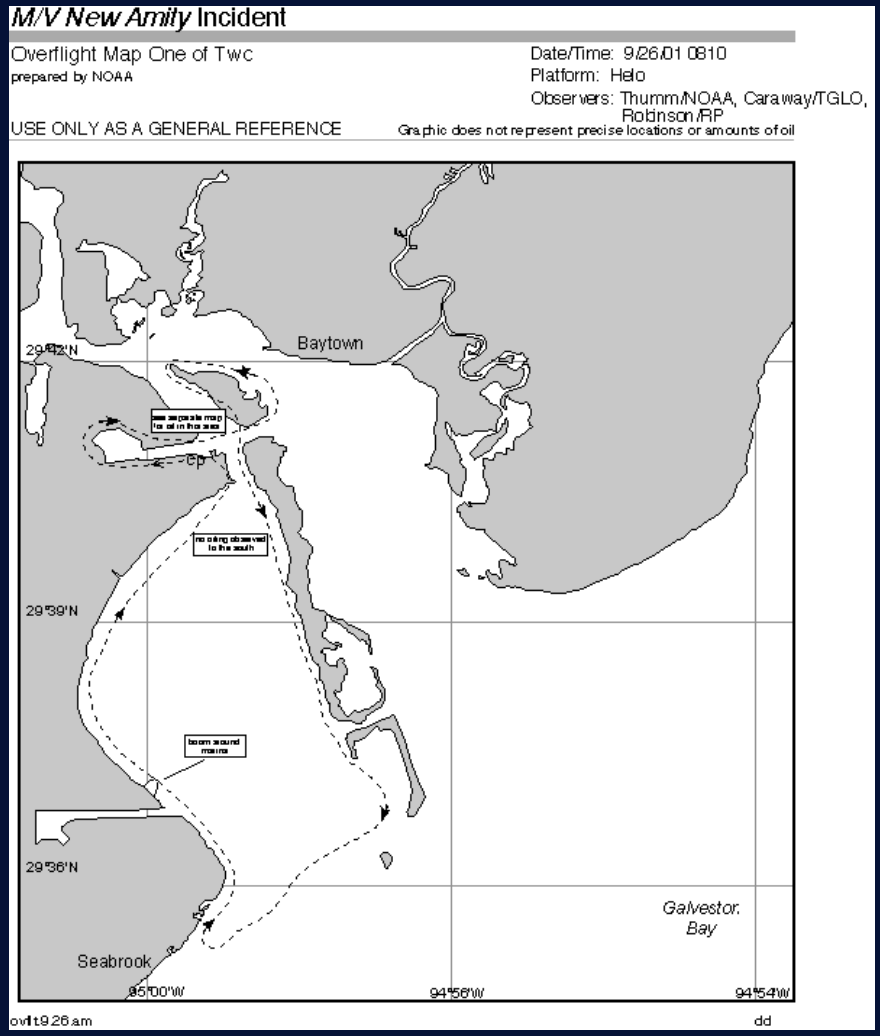
(Barge FT-22)

Weather is Very Important to Us!

NOAA ALOHA Plume Trajectory for H2S Emission

Overflights

Oil Spill Tracking and Documentation

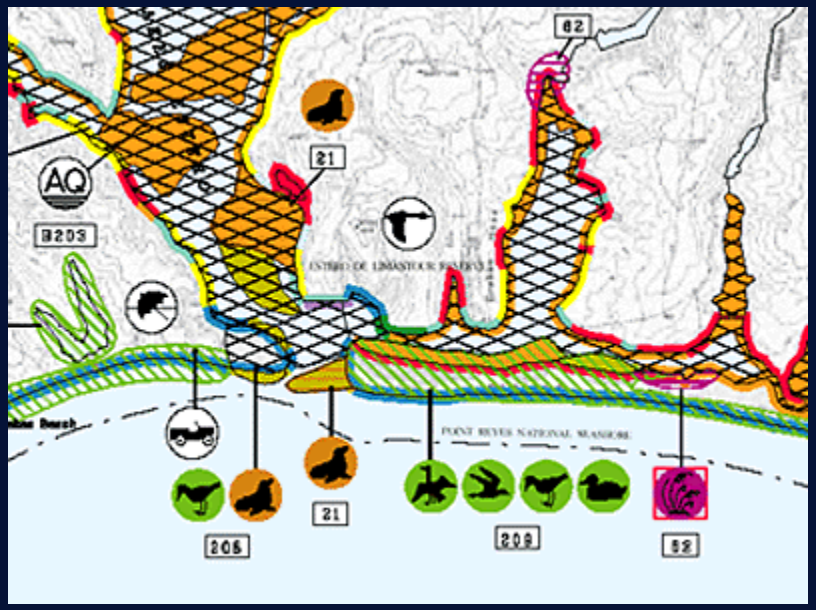


SCAT…

Natural Resources at Risk

- ESIs
- ESI Maps
- RARs
- Endangered Species
- Manager Consultations
  - Planning
  - Spill Response
  - Post-Incident
  - Ecological Risk Assessments

NOAA Trust Resources



“Spills are unplanned, uncontrolled scientific experiments.”

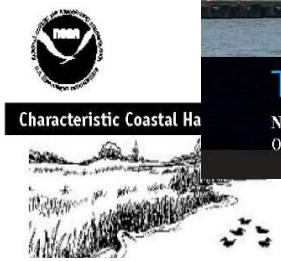
Charlie Henry

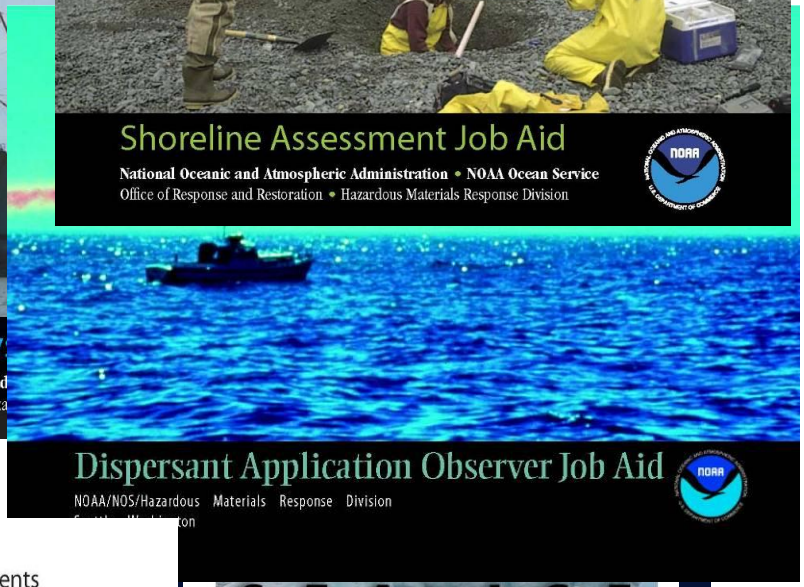
QuickTime™ and a
decompressor
are needed to see this picture.

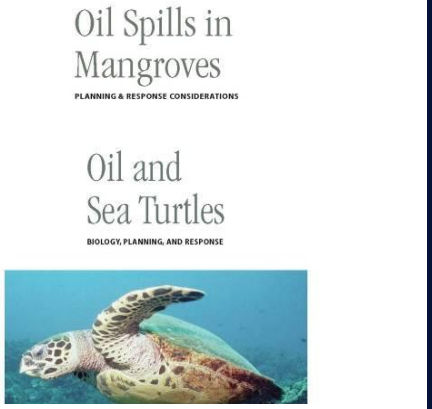
Research Efforts

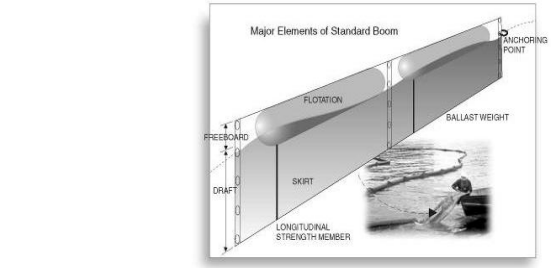
QuickTime™ and a
decompressor
are needed to see this picture.

Factsheets, Manuals & Job Aids









National Oceanic and Atmospheric Administration

Stewards of the Nation's Coastal Environment

Trustee Role

WHAT ARE **NOAA** TRUST RESOURCES?

- Commercial and recreational fishery resources
- Anadromous species (such as the Gulf Sturgeon)
- Endangered and threatened marine species and their habitats (sea turtles)
- Marine mammals including whales, dolphins, and seals
- Marshes, mangroves, seagrass beds, coral reefs
- Resources associated with National Marine Sanctuaries and National Estuarine Resource Reserves

“I have never been to the same oil spill twice.”

Jacqui Michel

Contacting your NOAA SSC

- There are only nine NOAA SSCs for all the US and US Territories.

- For support call:

(206) 526-4911